

TP 50-900/2-A-F-A-BAQE 400D 50HZ

Grundfos pump 96087185



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https://www.lenntech.com/grundfos/TP000/96087185/TP-50-900-2-A-F-A-BAQE.html

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Position | Qty. | Description

1

TP 50-900/2 A-F-A-BAQE



Product No.: On request

Single-stage, close-coupled, volute pump with in-line suction and discharge ports of identical diameter. The pump is of the top-pull-out design, i.e. the power head (motor, pump head and impeller) can be removed for maintenance or service while the pump housing remains in the pipework.

The pump is fitted with an unbalanced rubber bellows seal. The shaft seal is according to EN 12756. Pipework connection is via PN 16 DIN flanges (EN 1092-2 and ISO 7005-2).

The pump is fitted with a fan-cooled asynchronous motor.

Further product details

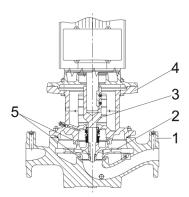
The product's minimum efficiency index (MEI) is greater or equal to 0.70. This is by the Commission Regulation (EU) considered as an indicative benchmark for best-performing water pump available on the market as from 1 January 2013.

Pump

Pump housing and pump head are electrocoated to improve the corrosion resistance.

Electrocoating includes:

- 1) Alkaline-based cleaning.
- 2) Pretreatment with zinc phosphate coating.
- 3) Cathodic electrocoating (epoxy).
- 4) Curing of paint film at 200-250 °C.



- 1: Pump housing
- 2: Impeller
- 3: Stub shaft
- 4: Pump head/motor stool
- 5: Wear rings

The pump housing is provided with a replaceable brass neck ring to reduce the amount of liquid running from the outlet side of the impeller to the inlet side. The impeller is secured to the shaft with a nut.

The pump is fitted with an unbalanced rubber bellows seal with torque transmission across the spring and around the bellows. Due to the bellows, the seal does not wear the shaft, and the axial movement is not prevented by deposits on the shaft.

Primary seal:

- Rotating seal ring material: carbon graphite, metal-impregnated
- Stationary seat material: silicon carbide (SiC)

This material pairing has a very good corrosion resistance and is especially suitable for water up to 120 °C. However, seal life will be reduced at temperatures above 90 °C. The material pairing is not recommended for liquids containing particles as this will result in heavy wear on the SiC face.

Secondary seal material: EPDM (ethylene-propylene rubber)

Position | Qty. | Description

EPDM has excellent resistance to hot water. EPDM is not suitable for mineral oils.

A circulation of liquid through the duct of the air vent screw ensures lubrication and cooling of the shaft seal.

The flanges have tappings for mounting of pressure gauges.

The motor stool forms connection between the pump housing and the motor, and is equipped with a manual air vent screw for venting of the pump housing and the shaft seal chamber. The sealing between motor stool and pump housing is an O-ring.

The central part of the motor stool is provided with guards for protection against the shaft and coupling. The pump shaft is fastened directly on the motor shaft with key and set screws.

Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to IEC and DIN standards. Electrical tolerances comply with IEC 60034.

The motor is flange-mounted with free-hole flange (FF).

Motor-mounting designation in accordance with IEC 60034-7: IM B 5, IM V 1 (Code I) / IM 3001, IM 3011 (Code II).

The motor efficiency is classified as IE3 in accordance with IEC 60034-30-1.

The motor has thermistors (PTC sensors) in the windings in accordance with DIN 44081/DIN 44082. The protection reacts to both slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

Thermal switches must be connected to an external control circuit in a way which ensures that the automatic reset cannot cause accidents. The motors must be connected to a motor-protective circuit breaker according to local regulations.

The motor can be connected to a variable speed drive for adjustment of pump performance to any duty point. Grundfos CUE offers a range of variable speed drives. Please find more information in Grundfos Product Center.

Technical data

Liquid:

Pumped liquid: Water
Liquid temperature range: 0 .. 120 °C
Liquid temperature during operation: 20 °C
Density: 998.2 kg/m³

Technical:

Rated flow: 61.1 m³/h
Rated head: 74.7 m
Actual impeller diameter: 255 mm
Primary shaft seal: BAQE

Curve tolerance: ISO9906:2012 3B

Materials:

Pump housing: Cast iron

EN-JL1040 ASTM A48-40 B

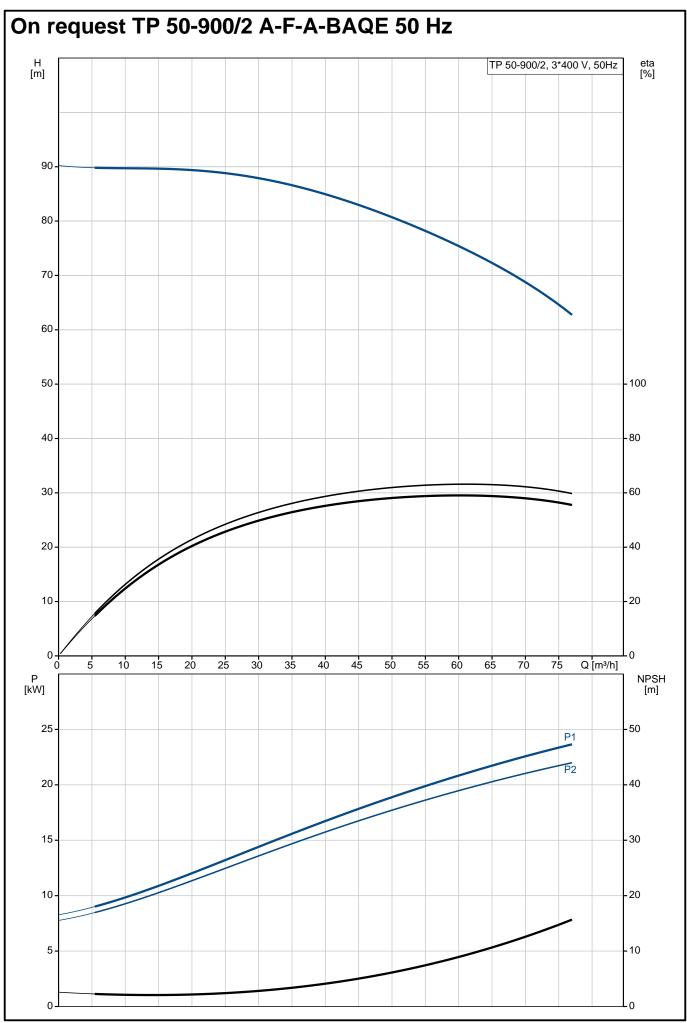
Impeller: Cast iron

EN-JL1030 ASTM A48-30 B

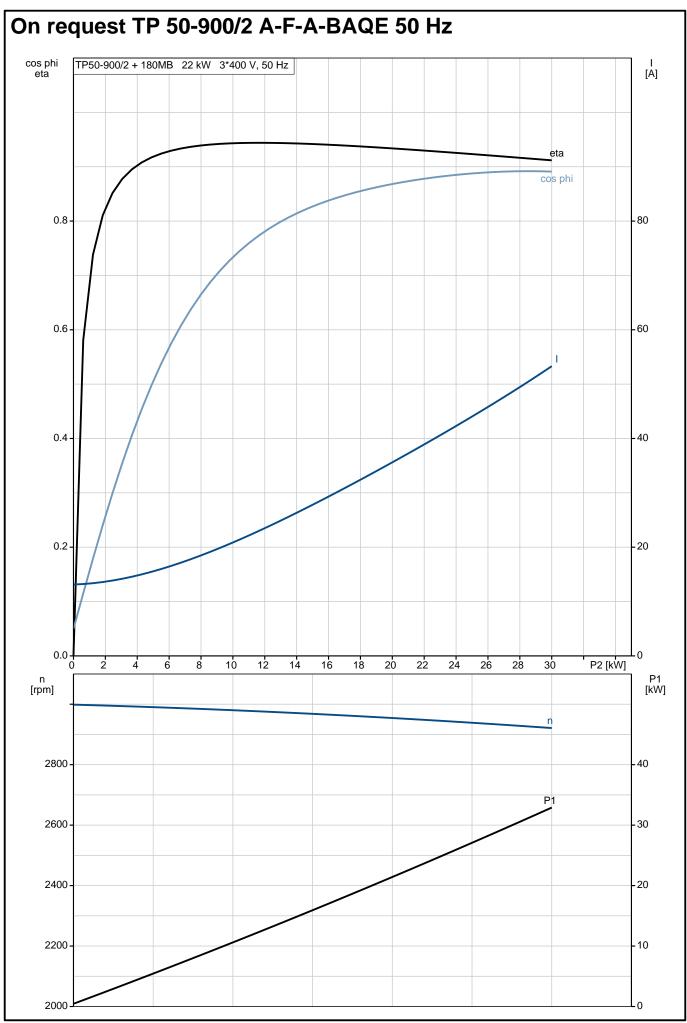
Installation:

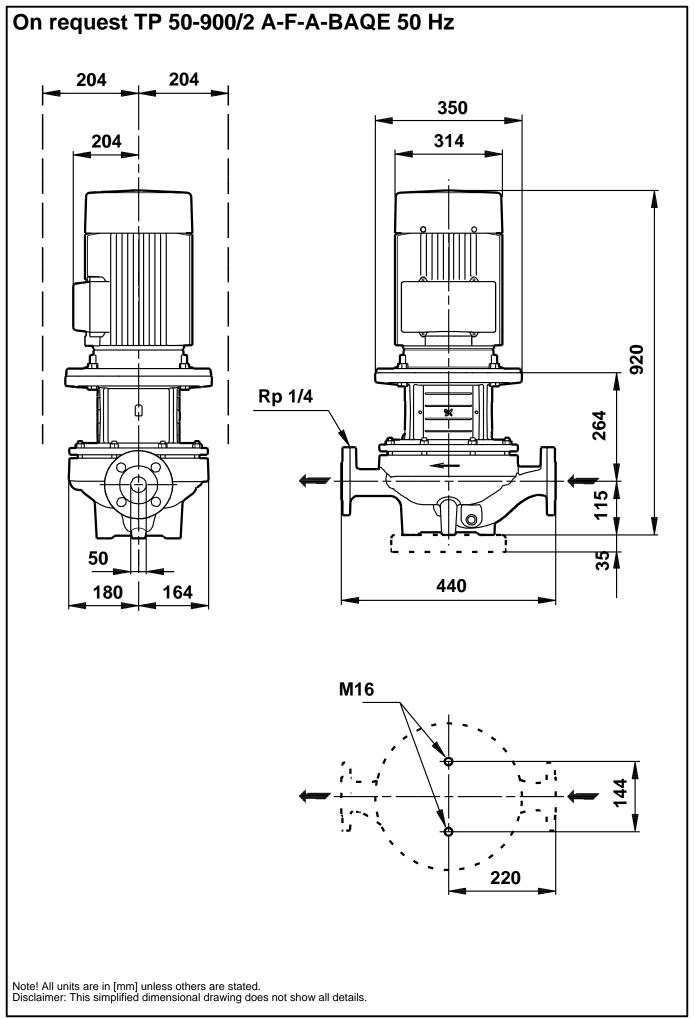
Range of ambient temperature: -30 .. 60 °C Maximum operating pressure: 16 bar DIN Flange standard: Pipe connection: **DN 50 DN 50** Pump inlet: Pump outlet: **DN 50** PN 16 Pressure rating: (@): 440 mm Flange size for motor: FF300

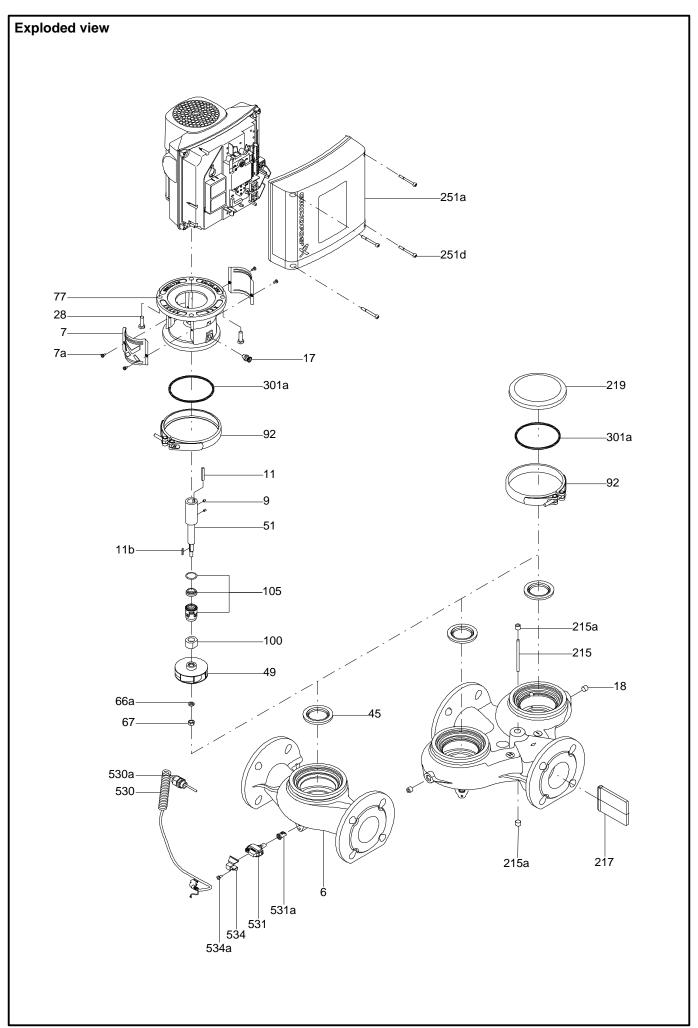
Position	Qty.	Description	
		Electrical data:	
		Motor type:	180MB
		IE Efficiency class:	IE3
		Rated power - P2:	22 kW
		Power (P2) required by pump: Mains frequency:	50 Hz
		Rated voltage:	3 x 380-415D/660-690Y V
		Rated current:	39.5/22.8 A
		Starting current:	830 %
		Cos phi - power factor:	0.90-0.90
		Rated speed:	2950 rpm
		Efficiency:	IE3 92,7%
		Motor efficiency at full load: Motor efficiency at 3/4 load:	92.7 % 93.7 %
		Motor efficiency at 1/2 load:	94.4 %
		Number of poles:	2
		Enclosure class (IEC 34-5):	55 Dust/Jetting
		Insulation class (IEC 85):	F
		Others:	0.70
		Minimum efficiency index, MEI ErP status:	: 0.70 EuP Standalone/Prod.
		Net weight:	195 kg
		Gross weight:	224 kg
		Shipping volume:	1.12 m³
		Danish VVS No.:	382762901

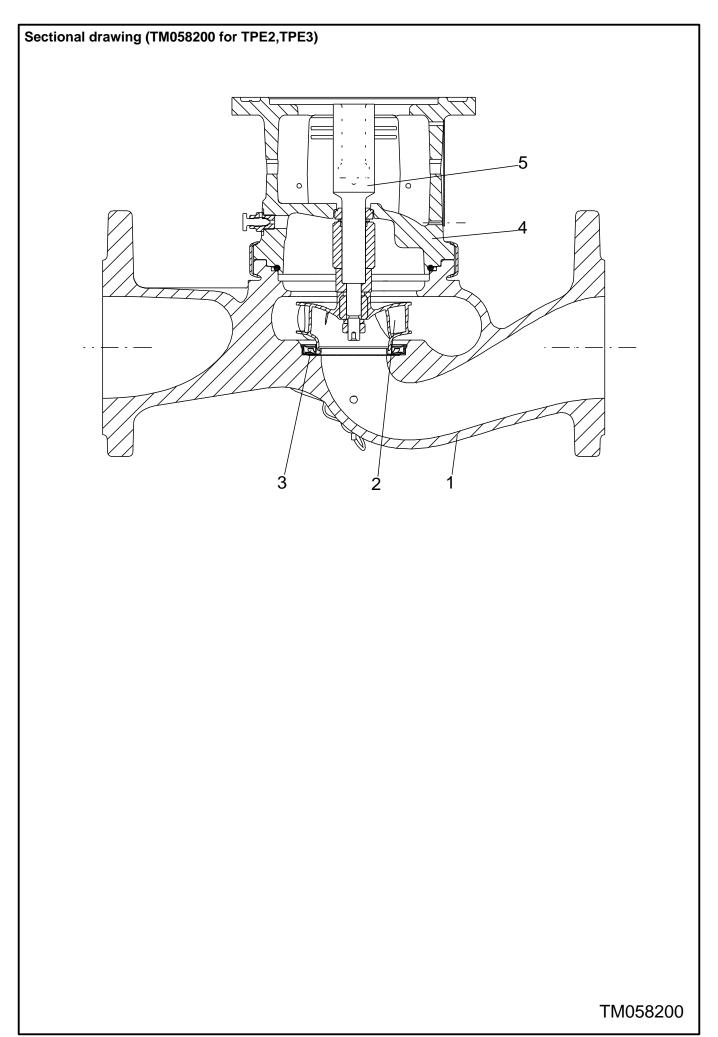


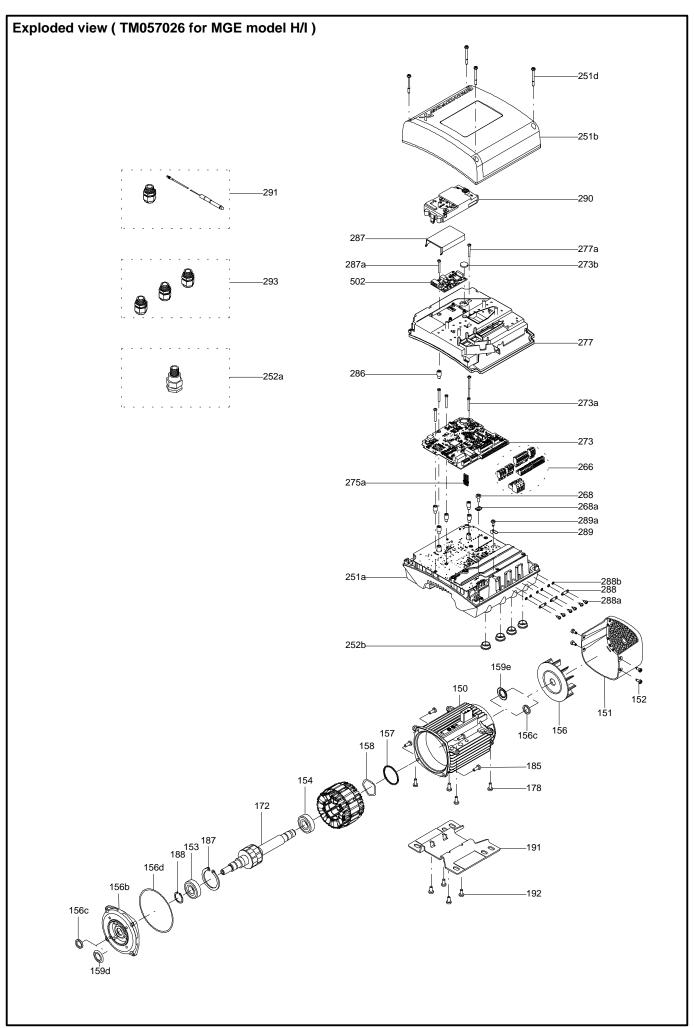
Description	Value	H [m] TP 50-900/2, 3*400 V, 50Hz eta [%]
General information:	TD 50 000/0 A 5 A DAO5	
Product name:	TP 50-900/2 A-F-A-BAQE	90
Product No:	On request	30
EAN number:	On request	80
Technical:	04.4 2/1	
Rated flow:	61.1 m³/h	70
Rated head:	74.7 m	
Head max:	900 dm	60
Actual impeller diameter:	255 mm	
Primary shaft seal:	BAQE	50 100
Curve tolerance:	ISO9906:2012 3B	40 -
Pump version:	A	40
Model:	A	30 - 60
Materials:		
Pump housing:	Cast iron	20 40
	EN-JL1040	
	ASTM A48-40 B	10 - 20
Impeller:	Cast iron	. /
	EN-JL1030	0 10 20 30 40 50 60 70 Q [m³/h]
	ASTM A48-30 B	P NPSH
Material code:	A	[kW] [m]
Installation:		25 - P1 - 50
Range of ambient temperature:	-30 60 °C	20- P2 -40
Maximum operating pressure:	16 bar	20
Flange standard:	DIN	15 - 30
Pipe connection:	DN 50	
Pump inlet:	DN 50	10 - 20
Pump outlet:	DN 50	
Pressure rating:	PN 16	5 - 10
(@)	440 mm	
Flange size for motor:	FF300	0.1
Connect code:	F	350
Liquid:		204
Pumped liquid:	Water	
Liquid temperature range:	0 120 °C	
Liquid temperature during operation:	20 °C	┆┍╃╢╟╟╏┆┈┈┆ <u>┎╼┉╀╨</u> ┪┆
Density:	998.2 kg/m³	
Electrical data:		Rp 1/4
Motor type:	180MB	
IE Efficiency class:	IE3	
Rated power - P2:	22 kW	50
Power (P2) required by pump:	22 kW	180 164 440
Mains frequency:	50 Hz	
Rated voltage:	3 x 380-415D/660-690Y V	M1 <u>6</u>
Rated current:	39.5/22.8 A	
Starting current:	830 %	<u> </u>
Cos phi - power factor:	0.90-0.90	220
Rated speed:	2950 rpm	
Efficiency:	IE3 92,7%	
Motor efficiency at full load:	92.7 %	Y
Motor efficiency at 3/4 load:	93.7 %	
Motor efficiency at 1/2 load:	94.4 %	
Number of poles:	2	
Enclosure class (IEC 34-5):	55 Dust/Jetting	
Insulation class (IEC 85):	F	
Motor protec:	PTC	TO AMERICAN L1 L2 L3
Motor No:	87470021	l in #
Others:		WHEN HIN OR COOK TO BU AGGS TO
Minimum efficiency index, MEI :	0.70	RECYFICATION OF THE PROPERTY O
ErP status:	EuP Standalone/Prod.	Bern Miller (1978) Bern Mil
Net weight:	195 kg	-
Gross weight:	224 kg	TO WELL SET OF THE PROPERTY OF
Shipping volume:	1.12 m³	
Danish VVS No.:	382762901	RELAY L1 L2 L3
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Parts list TP 50-900/2, Product No. On request Valid from 1.1.2011 (1152)

F	os	Description	Annotation	Données de classification	Référence	Quantité	Unité
+		Motor				1	pcs
-		Nut				1	pcs
6	66	Washer				1	
6	66a	Spring lock washer				1	
6	67	Nut		Thread: M14		1	
-		Motor stool cpl.				1	pcs
1	la	Motor stool				1	
7	7	Coupling guard				2	
77a		Pan head screw				4	
-		Pump housing cpl.				1	pcs
6	6	Pump housing				1	
3	36	Nut		Thread: M10		10	
-		Kit, Base plate				1	pcs
2	28g	Hex head screw				2	
5	56	Base plate				1	
-		Shaft seal cpl.				1	pcs
7	72a	O-ring		Diameter: 253,6		1	
				Material type: EPDM Thickness: 3,53			
1	105	Shaft seal		Material type: BAQE		1	
-		Stub shaft				1	pcs
9	9	Socket set screw		Length (mm): 6		2	
				Thread: M8			
	11	Parallel key		Dimension: 6X6X35		1	
5	51	Pump shaft				1	
-		Base plate cpl.				1	pcs
2	28g	Hex head cap screw		Length (mm): 30 MM		2	
				Thread: M16			
	56	Base plate				1	
	19	Plug				2	pcs
4	19	Impeller		Outer diameter: 255		1	pcs

Disclaimer: The information about the Grundfos pump in this document may be outdated. Data may be subject to alterations without further notice.

Please contact us to verify the data above is still accurate/up-to-date.

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